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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

EX PARTE

The Honorable Reed E. Hundt
Chairman
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

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Re: PR Docket No. 93-61
Automatic Vehicle Monitoring Systems

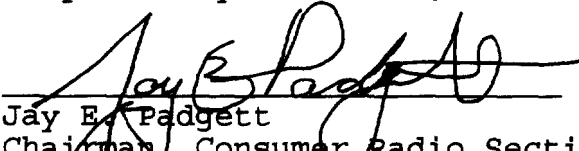
Dear Chairman Hundt:

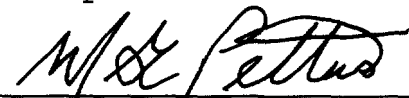
There have been recent discussions with you and various staff members in the Office of Engineering & Technology ("OET") and the Private Radio Bureau ("PRB") concerning the development and implementation of a testing program to determine the potential compatibility of Part 15 devices and AVM/LMS operations. At a recent meeting on September 26, 1994 with OET staff, the Part 15 Coalition stated that they intended to file such a plan. That plan is being submitted herewith for the Commission's consideration.

In accordance with Section 1.206(a)(1) of the Commission's Rules, two copies of this letter, as well as the attachment, are being filed with the Secretary's office.

If there are any questions concerning this submission, please contact either of the undersigned.

Respectfully submitted,


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**PROPOSED TEST PLAN OUTLINE
TO DETERMINE WHETHER AVM/LMS OPERATION AND
PART 15 DEVICES CAN BE MADE COMPATIBLE IN THE 902-928 MHz BAND**

This proposal is based on the dual premises that there is a desire on the part of the FCC to accommodate both new LMS services and the on-going Part 15 device operation in the 902-928 MHz band, and that, under the operating parameters now permitted for multilateration AVM (and for multilateration LMS as initially proposed),^{1/} there will be both interference from the multilateration AVM/LMS providers to Part 15 devices, and interference to the multilateration AVM/LMS providers from Part 15 devices. Therefore, the objective of testing is to determine whether there is any technical basis upon which compatibility between LMS systems and Part 15 devices could be achieved. This document is intended to serve as a broad outline of the test procedure. The details of the test procedure are to be agreed upon at a meeting of the LMS and Part 15 technical representatives which will be scheduled as soon as possible.

With respect to interference from Part 15 devices, the test parameters would be designed to determine:

- the potential interference effects to LMS receivers by various Part 15 transmitters at various heights above ground, various distances from LMS receivers and over various average terrains, both indoors and outdoors;
- the differences in potential interference to LMS receivers from various grandfathered and compliant Part 15 devices under the June, 1994 Section 15.247(b) rules regarding antenna gain;
- the interference effects on LMS receivers by field disturbance sensors operating in various parts of the 902-928 MHz band;
- the ease of identifying sources of interference to LMS receivers from Part 15 devices with the above, and other, characteristics; and,
- measurements of LMS receiver performance at various levels of carrier-to-interference ratios.

^{1/}With regard to the third major interest in this proceeding, the non-multilateration AVM/LMS providers, or so-called "tag readers," no problems are anticipated to either the Part 15 or multilateration AVM/LMS, assuming band segmentation, and operating specifications that permit their current function.

With respect to interference from LMS systems, the test parameters would be designed to determine:

- the operating and interference characteristics of both narrowband and wideband, high-powered forward links, and the effects on Part 15 devices;
- the effects on both LMS systems and Part 15 devices of confining narrowband high-powered forward links to the top edge of the band;
- the appropriate parameters regarding non-multilateration LMS systems to permit normal operation;
- parameters regarding LMS mobile to base links; and the potential interference effects to Part 15 devices by various LMS reverse links; and,
- measurements of receiver performance at various levels of carrier-to-interference ratio.

With regard to both Part 15 and AVM/LMS systems, the technical parameters of system timing, duty cycle and re-try/back-off characteristics and the effect of these on resulting performance would be determined. The Part 15 community believes that optimum sharing of the 902-928 MHz band can best be achieved by understanding these critical parameters.

We believe that a great deal can be learned from discussions among the parties by focusing on system descriptions, and by simple laboratory "bench" testing. The parties may undertake to do some field testing as well, but due to the minimal current build-out and loading of the systems involved, realistic future system interoperation cannot be determined by field testing. Assuming full, good faith cooperation from all parties, the testing itself could be accomplished in a matter of days, and follow-on discussion and analysis could be accomplished in a matter of a few weeks thereafter.

The proposed LMS service and the existing Part 15 services involve different types of operations, beginning with the fundamental distinction between licensed and unlicensed operation. The only way that the FCC can assure the technical compatibility between these two services is to determine, through testing, the operating specifications that will encourage and provide the most efficient and effective use of the frequency spectrum. Thus, it is in the FCC's interest that these tests and discussions proceed productively and expeditiously, which is most likely to happen if they are held under the auspices of the FCC, or if the FCC at least encourages all interested parties to participate in the testing process.